

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference <b>8871WO01</b>	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. <b>PCT/US2004/014771</b>	International filing date ( <i>day/month/year</i> ) <b>12 May 2004 (12.05.2004)</b>	Priority date ( <i>day/month/year</i> ) <b>12 May 2003 (12.05.2003) ]</b>
International Patent Classification (IPC) or national classification and IPC <b><sup>7</sup> H04B 17/00</b>		
Applicant <b>AWARE, INC.</b>		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).
2. This REPORT consists of a total of 7 sheets, including this cover sheet.  
  
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:
 

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input checked="" type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

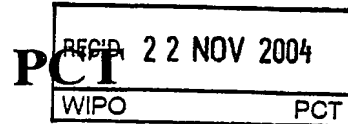
4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 740 14 35	Date of issuance of this report <b>18 November 2005 (18.11.2005)</b>  Authorized officer  <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Ellen Moyse</div> Telephone No. +41 22 338 89 75
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
JASON H. VICK  
MILES & STOCKBRIDGE P.C.  
1751 PINNACLE DRIVE  
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MCLEAN, VA 22102



## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference <b>8871WO01</b>		Date of mailing (day/month/year) <b>19 NOV 2004</b>
<b>FOR FURTHER ACTION</b> See paragraph 2 below		
International application No. <b>PCT/US04/14771</b>	International filing date (day/month/year) <b>12 May 2004 (12.05.2004)</b>	Priority date (day/month/year) <b>12 May 2003 (12.05.2003)</b>
International Patent Classification (IPC) or both national classification and IPC <b>IPC(7): H04B 17/00 and US Cl.: 375/224</b>		
Applicant <b>AWARE, INC.</b>		

**1. This opinion contains indications relating to the following items:**

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input checked="" type="checkbox"/> | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer  Forrester Isen Telephone No. 703-305-4700
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US04/14771

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

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Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>6, 7, 14, 15</u>	YES
	Claims <u>1-5, 8-13, 16-19</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-19</u>	NO
Industrial applicability (IA)	Claims <u>1-19</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Please See Continuation Sheet

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

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**Box No. VII Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

Claims 4, 5, 12, 13 and 19 are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof: These claims all contain the recitation "one or modems" which apparently should read - one or more modems--.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US04/14771

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

**V. 2. Citations and Explanations:**

Claims 1-5, 8-13 and 16-19 lack novelty under PCT Article 33(2) as being anticipated by Vrenjak (US 5,063,523A).

Regarding Claim 1, Vrenjak discloses a network management system that receive event attributes (i.e., obtains raw diagnostic information) (Fig. 3, step 204, column 11, lines 53-54; column 3, lines 47-64) from network objects including modems (i.e., one or more modems) (Fig. 1, reference 14, 16, 18, 20, 22; column 2, lines 62-64; column 3, lines 24-34) using asynchronous alarms and polled responses (i.e., high level protocols)(column 3, lines 34-40). Vrenjak further discloses formatting the event attributes into text (i.e., analyzing the raw diagnostic information)(column 3, lines 65-66). Vrenjak further discloses searching incoming event attributes and matching (i.e., correlating) the attributes with event rules (i.e., performing searches of raw and analyzed diagnostic information)(column 4, lines 7-20).

Regarding Claim 2, Vrenjak further discloses receiving event attributes in response to polling (column 3, lines 35-40)(i.e., identifying when a modem is to perform a test).

Regarding Claim 3, Vrenjak further discloses searching incoming event attributes and matching the attributes with event rules (i.e., searchably storing raw and analyzed diagnostic information)(column 4, lines 7-20).

Regarding Claim 4, Vrenjak further discloses incoming event attributes including object name and type (i.e., retrieving modem or user information)(column 3, lines 53-61).

Regarding Claim 5, Vrenjak further discloses modems communicating with the network management system via an out of band secondary channel (i.e., with internal diagnostic capability)(column 3, lines 20-28).

Regarding Claim 8, Vrenjak further discloses receiving event attributes (i.e., obtaining raw diagnostic information) in response to asynchronous alarms (i.e., automatically initiated) and polled responses (i.e., polling based)(column 3, lines 35-40).

Regarding Claim 9, Vrenjak further discloses a user terminal (Fig. 1, reference 12; column 3, lines 20-26) to obtain status or functional information, to attempt to locate malfunctions, to switch in redundant equipment and in general monitor the state of the network (i.e., display one or more of the raw diagnostic information and the analyzed diagnostic information, modem information, user information, available tests, most popular tests and repair instructions).

Claims 10, 11, 12, 13, 16 and 17 are essentially similar to Claims 1, 2, 4, 5, 8 and 9, respectively, and lack novelty for the same reasons.

Claims 18 and 19 are essentially similar to Claims 1 and 4, respectively, and lack novelty for the same reasons.

Claims 6 and 14 lack an inventive step under PCT Article 33(3) as being obvious over Vrenjak in view of Kung (US 5,159,685).

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US04/14771

**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**

Regarding Claim 6, as shown above apropos of Claim 1, Vrenjak anticipates all elements except an output module that provides a user with repair solutions. Kung (US 5,159,685) discloses an expert system for communication s network that determines appropriate diagnostic tests to be performed to diagnose a problem with the network and determines whether the appropriate test is an interruptive or non-interruptive test and obtains consent of an operator is the appropriate test is interruptive (column 5, lines 11-19). Kung further teaches that the benefits of such a system include reduced operation cost, less down time, increased network performance, more effective fault management in the network, and the ability to build and manage bigger networks (column 2, lines 16-21). It would have been obvious to one skilled in the art at the time of the invention to apply provision of expert system test suggestions (i.e., repair solutions) as taught by Kung to the network management system taught by Vrenjak for the purpose of realizing the aforesaid advantages.

Claim 14 is essentially similar to Claim 6 and lacks inventive step for the same reasons.

Claims 7 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Vrenjak.

Regarding Claim 7, as shown above apropos of Claim 1, Vrenjak anticipates all elements except the protocol being IP, ATM, HTTP and or SMTP. While Vrenjak discloses use of an out-of-band secondary channel, Vrenjak also teaches that other protocols may be used and that equivalent schemes may be readily adapted by those skilled in the art (column 3, lines 38-42). IP, ATM, HTTP and SMTP are all well-known standard protocols. It would have been obvious to one skilled in the art at the time of the invention to apply use of one or more of these protocols to the network management system taught by Vrenjak for the purpose of utilizing the system in a network that employs these protocols.

Claim 15 is essentially similar to Claim 7 and lacks inventive step for the same reasons.

Claims 1-19 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.